Capability Gap Brief

Major Pat Beckett
FMID
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Top Ten Gap Listing

FMID Section	Priority
Unmanned Aircraft Systems	1
Assault Support	2
Target Acquisition	3
Counter fire / Targeting	4
Fire Support Coordination	5
Information Operations	6
Personal Equipment	7
Small Arms / Crew-Served	8
Mobility / Counter-Mobility	9
Rockets / Artillery	10
Riverine / Special Operations	**11**
Public Affairs	12
Offensive Air Support	13
Electronic Warfare	14
Civil Affairs	15
Offensive Anti-Air Warfare	16

Capability Analyzed
Riverine / Special Operations

7 JCA's supported: Hi Pri-Joint Deployment/Rapid Distribution
7 MCT's supported : Hi Pri-ASSESS/Conduct Combat Assessment

Deficiencies in Conditions: Unable to conduct sufficient over the horizon insertion and extraction due to weather and sea state conditions
Deficiencies in Standards: Unable to conduct training to meet current free-fall jump requirements

Gap, Excess, or Shortfall

O	With the identified reorganization / increase in T/E O&M funding for all Recon equipment will require commensurate increases
T	**MMPS Training issues require inter-service coordination and increased training requirements**
M	**Further Decrements in current PORs will create additional gaps; EUBA, MRC are new programs and HAHONAV and URC require immediate funding attention to fill immediate gap**
F	**Parachute, boats and dive equipment require robust facilities for maintenance and storage. The split of MARSOC and increases / modifications will require appropriate facilities**
P	**MMPS personnel requirements for training and maintainers for parachutes, boats and dive equipment have the potential to necessitate a T/O increase**

Inputs utilized for analysis:

- MAGTF FAA dtd Jun 2006
- MCLL Database
- JCIDS supporting documentation for all PORs identified
- Marine Corps Midrange Threat Estimate: 2005-2015
- Grey Book – Mar 06
- Warfighting Program Evaluation Board POM-10 Guidance
- DC, PP&O GCE Advocate's Capability List. – Jun 06
- Initial end-strength increase planning figures

Current PORs:

- High Altitude High Opening Navigation (HAHO NAV)
- Multi-Mission Parachute System (MMPS)
- Non-Gasoline Burning Outboard Engine (NBOE)
- Underwater Reconnaissance Capability (URC)
- Combatant Diver Dive Mask (CDDM)
- Diver Propulsion Device (DPD)

Impact on the MAGTF

- **Explain how the gap was identified and why it is so important to the Marine Corps to mitigate:** **FMID conducted a FNA that assessed the ability of current and programmed joint warfighting capabilities against the range of operational conditions and standards identified in the FAA. This process identified a list of gaps that supported 7 JCAs and 7 MCTs associated with Riverine and Special Operations. These gaps were validated by the Advocates Capabilities List (ACL) that was generated in 2006.**

  Personnel/organizations conducting these missions are uniquely trained and equipped to give the MAGTF commander critical ISR capabilities to support operations across the full spectrum of conflict. These forces deploy globally and are required to be able to accomplish a variety of missions under all conditions and environments.

- **Describe how the gap impacts our ability to execute operating concepts:** **The Marine Corps has a requirement to support the operational concepts of Expeditionary Maneuver Warfare (EMW), Operational Maneuver from the Sea (OMFTS), and Ship-to-Objective-Maneuver (STOM). As we move to execute these concepts the MAGTF Area of Influence will expand and the distances at which we project our forces to shore will increase. Gaps in our ability to safely and effectively insert and extract R&R forces from greater standoff distances will have a negative impact on the MAGTF ability to accomplish these missions.**

- **Is the gap identified related to a required DO Capability? If so, what additional requirements are needed to achieved the desired capability?** **One overarching element of Distributed Operations is that units will conduct operations separated beyond the limits of mutual support. DO places a premium on situational awareness, thereby necessitating enhancement and improved capabilities in the MAGTF's ability to conduct ISR missions.**

Key Attributes Needed to Resolve the Gap

- **Identify the key attributes and associated measures of effectiveness a solution will possess.**

  - Provide a long range/Clandestine insertion and extraction capability that addresses the OTH aspects of the Marine Corps Operational Concepts.
  - Provide the ability to clandestinely penetrate denied areas with ISR (ground Reconnaissance) assets.

  * Critical capability at the tactical and operational levels especially when enemy forces posses significant Anti-Air threat, airspace is denied for political reasons, or clandestine insert/extract is paramount.

New or Current Capability Issues

- **Was the gap identified because we are establishing a new capability? An addition or improvement of an existing capability? If yes, explain:**

  There was a previously existing capability gap that was exacerbated by the increased ISR requirements associated with USMC concepts of EMW, STOM, and DO requirements. Current capabilities are being improved through the emergence of innovative/improved technology.

  Is the basic capability MC unique? If not, describe how this capability is addressed by other services. If another service also has a capability gap, describe its mitigation initiatives.

- Sister services maintain an airborne and dive capability however the mission profiles associated with USMC concepts of EMW, STOM, and DO make this a unique Marine Corps capability.

- USA and USN are seeking to advance their Para and Dive capabilities to meet this capability Gap. Although exploring improved capability through technology, USA para efforts are not as mature as USMC efforts.

Integration Concerns

- **Describe critical linkage(s) to other Integration Division. If none, so state.**

-LID: Joint Precision Air Delivery System (JPADS) capability requires close coordination to ensure fielding of a capability to clandestinely resupply committed R&S teams ISO the GCE.

-LID: Must maintain visibility of unique logistical and maintenance intensive aspects associated with specialized equipment in support of insert and extract capability (Dive/ Airborne/boat equipment shelf life issues, and consolidated logistical facility).

-C2: Must ensure tactical communications provide on the move, OTH capability support extended range operations.

-Intel: There is an inexorable link between this capability and the Marine Corps ISR enterprise.

Possible DOTLPFM Impacts

- **Doctrine.**
  - Doctrine alone will not address this capability gap. As enhanced operational capabilities evolve, changes in Doctrine, Tactics, Techniques and Procedures must keep pace.

- **Organization**
  - Assumptions: organizational change issues limited to adjustments within existing force structure.
  - What organizational changes, if any, will eliminate or mitigate the capability gap?
  - No organizational changes will mitigate this gap. Current effort to solidify the USMC Recon/MARSOC structure will increase the capacity of the Marine Corps to provide a scalable and flexible capability to the MAGTF/Joint Force. As new equipment is fielded there will be an increased need for maintainers and support personnel.

DOTLPFM Impacts

- **Training**
  - **How could training be modified or provided to mitigate or eliminate the gap? Training alone will not eliminate this Gap. The limiting factor is the physical limitations of existing equipment.**
  - **What training requirements are identified for the fielding of new equipment? Fielding of enhanced equipment capabilities will generate the requirement to modify existing training. The equipment we are fielding is USMC unique equipment that requires dedicated, equipment specific training that must be provided by the Marine Corps. As we field new technology there are associated training requirements for Marines to employ that technology.**
    - **Dive Supervisor certification**
    - **Jump Master certification**
    - **Coxswain training**
    - **Operator training.**
  - **Who can provide the required training?**
    - **Combatant Diving: USMC combatant dive course will conduct training in Panama City. Requires training immediately upon fielding of new equipment.**
    - **Airborne: Conducted at Basic Airborne Course, Jump Master Course, Parachute Riggers Course, Military Free Fall Course, MMPS Transition Course.**
    - **The Marine Corps is currently pursuing the establishment of a USMC MFF course. Will require 5 Million per year to run this course.**

DOTLPFM Impacts

- **Leadership and Education**
  - L&E will not mitigate this gap however, the material solutions we are currently seeking will mitigate the risk associated with conducting these operations thereby, increasing the MAGTF Commander's operational flexibility.
  - Must ensure the utility of long range clandestine insertion capability is not lost on the MAGTF leadership (education of capability).
  - **Can leadership decisions mitigate gap?** Ensuring these capabilities receive priority within the combat development process will help mitigate these gaps.
- **Personnel**
  - There are no personnel changes or MOS realignments that will mitigate this gap.
- **Facilities**
  - Improvements to existing maintenance and sustainment facilities are required to mitigate this gap. The unique logistical and maintenance intensive aspects associated with specialized equipment in support of insert and extract capability (Dive/ Airborne/boat equipment shelf life issues, and consolidated logistical facility, Shipboard considerations).
  - **Paralofts, Dive lockers, Boat Lockers, Service level maintenance. USMC exploring consolidated logistics support facility in Panama City.**

DOTLPFM Impacts

- **Materiel: Currently there are material solutions that will Mitigate these Gaps. These materiel solutions are:**
  - **Recon, Patrolling, Insertion, Extraction (RPIE) equipment:**
    - **High-Altitude High Opening Navigation Goggles (HAHO NAV)** is a new initiative that will provide significant enhancements to the HAHO NAV capability and is necessary to support the 70 Km ranges of the MMPS. SON signed in Feb 07. AAO is driven by the number of Special Application Parachute canopies. AAO is 605. Currently on schedule for procurement in FY08 and FY09.
    - **Multi Mission Parachute System (MMPS)** provides the USMC with an enhanced HAHO/HALO capability and replaces the current MC-5 which is nearing the end of service life. 1308 have been procured. Additional systems will need to be procured to support the expansion of the Reconnaissance Battalions.
    - **Parachutist High Altitude Oxygen System (PHAOS)** is an improved capability to provide O2 during HAHO/HALO inserts (Old system had safety concerns). Fielding to be completed in CY 07. NWSC Panama City FL to provide depot level support and training.
    - **MC-6 Low Level Round Parachute** replaces the MC-1 conventional low level parachute. Fielding will begin 3rd Qtr FY07.
    - **Parachutist Individual Equipment Kit (PIEK)** completes the parachute insert capability by providing a standard suit of consolidated and supportable equipment. Currently fielding of replacement has been completed and these program has transitioned to sustainment.

DOTMLPF Impacts

- **Underwater Reconnaissance Capability (URC).** The URC core initiative is a sustainment funding line for the operational and life support of fielded USMC combatant dive systems. **The URC program took a decrement of approximately 80% in FY07 which has negatively impacted this gap**. These systems are:

  - **Diver Propulsion Device (DPD)** provides a long range underwater delivery capability of a combatant diver pair and is the cornerstone of the URC program. 136 were fielded through FY 06 with 60 more expected in FY 07.

  - **Enhanced Underwater Breathing Apparatus (EUBA)** is a life support system required to perform prolonged clandestine diving operations in order to better match the capability of the DPD. There is a foreign comparative test (FCT) program underway in FY 07 to evaluate candidate systems. Must provide POM 10 funding to ensure this capability is realized.

  - **Tactical Underwater Locator Beacon (TULB)** is an acoustic beacon used to support retrieval of cached equipment. Upon arrival at their mission objective, a dive team will cache equipment on the ocean bottom for later retrieval. The TULB will provide azimuth and range information to the divers to direct them to the cache site. Must provide POM 10 funding to ensure this capability is realized.

  - **Tactical Hydrographic Survey Equipment (THSE)** is an underwater charting and navigation capability that can be integrated into the DPD or used as a stand alone system. SON was signed in April 05. Currently there is an MOA with DARPA to develop system. USMC will perform Op eval when systems ready in FY08. Procurement money budgeted in FY08 POM. Must guard against funding being decremented.

  - **Combatant Diver Display mask (CDDM)** is a wireless diver full mask system that provides mission critical information and voice communications capability for combatant divers. Currently under development. 15 expected in Mar w/user eval in June. IOC Sep 07 and FOC expected Sep 08.

  - **Combat Diver Dry Suit (CDDS)** provides a critical capability to protect combatant divers against extended exposure while operating the DPD. This requirement validated and a SON was signed in Mar 06. Market research conducted. U.S. suits failed testing and Non-GSA sample passed. Contract awarded and fielding of CDDS is underway in FY07.

  - **Expeditionary Hyperbaric Chamber System (EHCS)** is a light weight, air transportable recompression capability for deployed Marines . There are Navy approved and certified systems available. USMC currently purchasing 6 systems through ISEA with an AAP (Navy funded entire requirement). Expected fielding FY07.

DOTMLPF Impacts

-Family of Small Craft:

- **Combat Rubber Reconnaissance Craft (CRRC)** is the USMC's primary means accomplishing amphibious raids. Enhancements to this system are essential to improve sea keeping ability and system longevity. The test models feature a self inflation system and an inflatable, rigid floor that reduces system weight by 17% and set up by 87% with a single Warfighter resulting in significant improvements for operational capability and force protection. Approved for FY07 Defense Acquisition Challenge (DAC) funds.

- **Non-Gasoline Burning Outboard Engine (NBOE)** is a much needed replacement for current small craft propulsion units and will provide an enhanced capability as well as compliance with DOD "single battlefield fuel" requirements. SON signed in September 06 with DAC funds provided in Nov 06. Test and evaluations ongoing with procurement anticipated in FY 07. FY07 supplemental funds provided to purchase the AAO.

- **Open-Water Safety Craft (OWSC)** will function as a waterborne ambulance and provide a safety platform capability not previously available during waterborne training. Craft fielding in process and will be completed in FY 07.

- **MAGTF Small Craft** this proposed initiative supports the development of a small craft capable of transiting from amphibious ships to an objective undetected at high speed, over longer distances, with an increased payload during high sea states than is currently possible. Received Congressional plus up to test/eval several commercial options. Requirements documentation necessary to drive POM 10 funding.

Recommendation

- **Recommendation: Further decrement to the Riverine/Spec Ops PORs will exacerbate this critical gap. Recommend CD&I in conjunction with PP&O/MCSC maintain close coordination to guard against further decrement of planned funding.**

- **Fully support funding of the establishment of Marine Free Fall course.**